

IN THE CLAIMS:

Please cancel Claim 2 without prejudice or disclaimer of the subject matter recited therein.

Please amend Claims 1, 3-6 and 14-17 as follows.

1. (Currently Amended) An image processing apparatus, comprising:  
image input means for inputting an image signal relating to a television broadcast;  
menu generation means for generating a menu image signal representing an operation menu relating to processing of the image signal and having a plurality of menu portions at different hierarchical levels each including at least one menu item, and generating a registration menu image signal representing a registration menu having a plurality of items corresponding to said plurality of function keys;  
display control means for displaying on a display unit an image corresponding to the image signal output from said image input means and the operation menu corresponding to the menu image signal generated by said menu generation means;  
instruction input means for receiving an instruction from an operating unit including a plurality of function keys and selection means for selecting a desired item in the operation menu displayed on said display unit;  
assignment means for assigning, according to a predetermined operation by the operating unit, a function according to one item selected by said selection means from the items in the operation menu displayed on said display unit to one of said plurality of function keys; and

control means for controlling, in response to said operation of the function key, said image input means to execute processing corresponding to the function assigned to said function key by said assignment means,

wherein said menu generation means outputs the generated registration menu image signal to said display control means,

wherein the item included in each of the menu portions of the different hierarchical levels of the displayed operation menu is selected using an up-key and a down-key,  
and

wherein said assignment means assigns a selection state of the item included in each of the menu portions of the different hierarchical levels of the operation menu to one of the plurality of function keys.

Claim 2. (Cancelled).

3. (Currently Amended) An apparatus according to claim [[2]] 1, wherein said menu generation means generates said registration menu image signal so that said registration menu is displayed adjacent to said operation menu.

4. (Currently Amended) An apparatus according to claim [[2]] 1, wherein said selection means is also capable of selecting one of the items in said registration menu as desired, and said assignment means assigns the function corresponding to the item selected from said operation menu by said selection means to one of the function keys corresponding to the item selected from the registration menu by said selection means.

5. (Currently Amended) An apparatus according to claim [[2]] 1, wherein said assignment means performs said assignment operation according to the key operation performed by said operating unit to determine one of the items in said registration menu as desired.

6. (Currently Amended) An apparatus according to claim [[2]] 1, wherein said assignment means performs said assignment operation in response to the absence of any operation by said operating unit during a predetermined time period.

7. (Original) An apparatus according to claim 1, wherein said menu portion at the lowest level includes a plurality of menu items corresponding to said plurality of function keys, and said assignment means assigns the function corresponding to the item selected from said operation menu by said selection means to one of the function keys corresponding to the item selected from the menu items at the lowest level by said selection means.

8. (Original) An apparatus according to claim 1, wherein said control means controls said control object in order to execute the function corresponding to the item selected by said selection means from the operation menu displayed on said display unit.

9. (Original) An apparatus according to claim 1, wherein said operating unit comprises a remote control device.

10. (Original) An apparatus according to claim 1, wherein said menu generation means includes a storage unit for storing image data representing said operation menu.

11. (Original) An apparatus according to claim 1, wherein said menu generation means includes a storage unit for storing character code data and font data representing said operation menu.

12. (Original) An apparatus according to claim 1, wherein said assignment means includes a memory for storing code data representing functions assigned to said plurality of function keys.

13. (Original) An apparatus according to claim 1, wherein said display control means synthesizes a combined image signal by combining the image signal output from said image input means and the menu image signal generated by said menu generation means, and displays an image corresponding to said combined image signal on the display unit.

14. (Currently Amended) A signal processing apparatus, comprising:  
signal input means for inputting an image signal and an audio signal relating to a television broadcast;  
menu generation means for generating a menu image signal representing an operation menu relating to processing of the audio signal and having a plurality of menu portions at different hierarchical levels each including at least one menu item, and

generating a registration menu image signal representing a registration menu having a plurality of items corresponding to said plurality of function keys;

audio output means for outputting, to an audio monitor, sound relating to the audio signal output from said signal input means;

display control means for displaying on a display unit an image corresponding to the image signal output from said signal input means and the operation menu corresponding to the menu image signal generated by said menu generation means;

instruction means for receiving an instruction from an operating unit including a plurality of function keys and selection means for selecting a desired item in the operation menu displayed on said display unit;

assignment means for assigning, according to a predetermined operation by said operating unit, a function corresponding to one item selected by said selection means from the items in operation menu displayed on said display unit to one of said plurality of function keys; and

control means for controlling, in response to the operation of said function key, said audio input means to execute processing corresponding to the function assigned to said function key by said assignment means,

wherein said menu generation means outputs the generated registration menu image signal to said display control means.

wherein the item included in each of the menu portions of the different hierarchical levels of the displayed operation menu is selected using an up-key and a down-key, and

wherein said assignment means assigns a selection state of the item included in each of the menu portions of the different hierarchical levels of the operation menu to one of the plurality of function keys.

15. (Currently Amended) A television receiver, comprising:

receiving means for receiving a television broadcast;

image processing means for processing an image signal relating to the television broadcast received by said receiving means;

audio processing means for processing an audio signal relating to the television broadcast received by said receiving means;

a display unit;

a speaker for outputting sound corresponding to the audio signal processed by said audio processing;

menu generation means for generating a menu image signal representing an operation menu having a plurality of menu portions at different hierarchical levels and relating to processing of the image signal and the audio signal, and generating a registration menu image signal representing a registration menu having a plurality of items corresponding to said plurality of function keys;

display control means for synthesizing a combined image signal by combining the image signal output from said image processing means and the menu image signal generated by said menu generation means, and for displaying an image corresponding to the combined image signal on said display unit;

instruction means for receiving an instruction from a remote controller having an including of function keys and selection means for selected a desired item in the operation menu displayed on said display unit;

assignment means for assigning, according to a predetermined operation by said remote controller, a function according to one item selected by said selection means from items in the operation menu displayed on said display unit to one of said plurality of function keys; and

control means for controlling, in response to the operation of said function key, said image processing means and said audio processing means to execute processing according to said function assigned to the function key by said assignment means,

wherein said menu generation means outputs the generated registration menu image signal to said display control means,

wherein the item included in each of the menu portions of the different hierarchical levels of the displayed operation menu is selected using an up-key and a down-key,  
and

wherein said assignment means assigns a selection state of the item included in each of the menu portions of the different hierarchical levels of the operation menu to one of the plurality of function keys.

16. (Currently Amended) An image processing method, comprising the steps of:

inputting an image signal relating to a television broadcast;

generating a menu image signal representing an operation menu relating to processing of the image signal and having a plurality of menu portions at different hierarchical levels each including at least one menu item, and generating a registration menu image signal representing a registration menu having a plurality of items corresponding to said plurality of function keys;

displaying on a display unit an image corresponding to the image signal obtained in said signal input step and the operation menu corresponding to the menu image signal generated in said menu generation step;

receiving an instruction from an operating unit including a plurality of function keys and selection means for selecting a desired item in the operation menu displayed on the display unit;

assigning, according to a predetermined operation by the operating unit, a function corresponding to one item selected by said selection means from the items in the operation menu displayed on said display unit to one of the plurality of function keys; and

controlling, in response to said operation of the function key, said signal input step to execute processing according to the function assigned to said function key in said assignment step,

wherein said menu generation step outputs the generated registration menu image signal to said display control step,

wherein the item included in each of the menu portions of the different hierarchical levels of the displayed operation menu is selected using an up-key and a down-key,  
and



wherein said assignment means assigns a selection state of the item included in each of the menu portions of the different hierarchical levels of the operation menu to one of the plurality of function keys.

17. (Currently Amended) A signal processing method, comprising the steps of:
- inputting an image signal and an audio signal relating to a television broadcast;
  - generating a menu image signal representing an operation menu relating to processing of the audio signal and having a plurality of menu portions at different hierarchical levels each including at least one menu item, and generating a registration menu image signal representing a registration menu having a plurality of items corresponding to said plurality of function keys;
  - outputting, to an audio monitor, sound corresponding to the audio signal obtained in said signal input step;
  - displaying on a display unit an image corresponding to the image signal obtained in said signal input step and the operation menu corresponding to the menu image signal generated in said menu generation step;
  - receiving an instruction from an operating unit including a plurality of function keys and selection means for selecting a desired item in the operation menu displayed on the display unit;

assigning, according to a predetermined operation by said operating unit, a function according to one item selected by said selection means from the items in operation menu displayed on said display unit to one of said plurality of function keys; and

controlling, in response to the operation of the function key, said audio input step to execute processing corresponding to the function assigned to said function key in said assignment step,

wherein said menu generation step outputs the generated registration menu image signal to said display control step,

wherein the item included in each of the menu portions of the different hierarchical levels of the displayed operation menu is selected using an up-key and a down-key,  
and

wherein said assignment means assigns a selection state of the item included in each of the menu portion of the different hierarchical levels of the operation menu to one of the plurality of function keys.